

INTERNATIONAL SEARCH REPORT

International application No.
PCT/AU2004/001383

A. CLASSIFICATION OF SUBJECT MATTER

Int. Cl. 7: C07H 21/04, 21/02; C07K 16/40; A61K 31/7105, 31/711, 31/7115, 31/712, 31/7125, 31/395; A61P 35/00, 29/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

SEE KEYWORDS AS INDICATED BELOW

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
STN: Files WPIDS, CA, Medline, Biosis: Keywords: hyaluronan synthase, hyaluronidase, sense, antisense, antibod?, antagonist?

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,X	US 6682904 B1 (FROST) 27 January 2004 Whole Document	1, 3-23
P,X	WO 2004/003158 A2 (GENENTECH INC) 8 January 2004 Whole Document	1, 2, 12-23
X	EP 881294 A2 (SMITHKLINE BEECHAM CORPORATION) 2 December 1998 Whole Document	1, 2, 4-23
X	WO 1998/000553 A1 (INCYTE PHARMACEUTICALS) 8 January 1998 See especially pages 26,27,36,37	1, 3, 4, 6-23

Further documents are listed in the continuation of Box C

See patent family annex

* "A" Special categories of cited documents: document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"E" earlier application or patent but published on or after the international filing date	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search
15 December 2004

Date of mailing of the international search report

7 JAN 2005

Name and mailing address of the ISA/AU

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 1998/000551 A2 (MAYO FOUNDATION FOR MEDICAL EDUCATION AND RESEARCH) 8 January 1998 See especially pages 33-34	1, 2, 4, 5, 16-23
X	WO 1997/040174 A1 (LEUKOSITE INC) 30 October 1997 See especially pages 17, 19	1, 2, 4-23
X	NISHIDA et al, "Antisense Inhibition of Hyaluronan Synthase-2 in Human Articular Chondrocytes Inhibits Proteoglycan Retention and Matrix Assembly", The Journal of Biological Chemistry, Vol. 274, No. 31, 1999, pages 21893-21899 Whole Document	1, 2, 4, 5, 7-9, 16
X	BULLARD et al, "Hyaluronan Synthase-3 is upregulated in Metastatic Colon Carcinoma Cells and Manipulation of Expression alters Matrix Retention and Cellular Growth", Int. J. Cancer, Vol. 107 (5), 2003, pages 739-746 Whole Document	1, 2, 4, 5, 16-23
X	SIMPSON et al, "Inhibition of Prostate Tumor Cell Hyaluronan Synthesis Impairs Subcutaneous Growth and Vascularization in Immunocompromised Mice", American Journal of Pathology, Vol. 161, No. 3, 2002, pages 849-857 See especially page 850, Column 1	1, 2, 4, 5, 16
X	SIMPSON et al, "Manipulation of Hyaluronan Synthase Expression in Prostate Adenocarcinoma Cells alters Pericellular Matrix Retention and Adhesion to Bone Marrow Endothelial Cells", The Journal of Biological Chemistry, Vol. 277, No. 12, 2002, Pages 10050-10057 See especially pages 10051, 10056, 10057	1, 2, 4, 5, 16-23
X	ZHANG et al, "Glucocorticoids induce a near-total suppression of hyaluronan synthase mRNA in dermal fibroblasts and in osteoblasts: a molecular mechanism contributing to organ atrophy", Biochemical Journal, Vol. 349 (part 1), 2000, pages 91-97 See Abstract	1, 2, 15-23
X	UEKI et al, "Inhibition of hyaluronan synthesis by vesnarinone in cultured human myofibroblasts", Biochimica et Biophysica Acta, Vol. 1495 (2), 2000, pages 160-167 See Abstract	1, 2, 15-23
X	Derwent Abstract Accession No. 2003-160139/16, Class B05, JP 2002293740 A (SANSEI SEIYAKU KK) 9 October 2002 Abstract	1, 16-23
X	HAKANSON et al, Chemical Abstracts Accession No. 43:15662 & Journal of the National Cancer Institute, (1940-1978), 1948, 9, 129-132 Abstract	1, 16-23

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This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report			Patent Family Member			
US	6682904	NIL				
WO	2004/003158	NIL				
EP	881294	CA 2231723	JP	11009288	JP	2002186495
		US 5994100	US	6350446		
WO	1998/000553	AU 34098/97	US	5854046	US	5958750
		US 6057110				
WO	1998/000551	AU 36522/97	US	6492150	US	6602693
WO	1997/040174	US 6423514	US	2002151026		

Due to data integration issues this family listing may not include 10 digit Australian applications filed since May 2001.

END OF ANNEX

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Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:
2. Claims Nos.: 1-3, 15-23 (in part) because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
Claims 1-3 and 15-23 potentially encompass a very large range of compounds and treatments such that a meaningful search covering the full scope of these claims is not feasible. Accordingly, the search has been largely restricted to compounds for which there is descriptive support, namely antibody and nucleic acid antagonists of hyaluronan synthase and hyaluronidase.
3. Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a)

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

The additional search fees were accompanied by the applicant's protest.
 No protest accompanied the payment of additional search fees.